

Pra tition r's Docket N . NEB-177-PUS

PATENT

Preliminary Classification:

Proposed Class:

Subclass:

NOTE: "All applicants are requested to include a preliminary classification on newly filed patent applications. The preliminary classification, preferably class and subclass designations, should be identified in the upper right-hand corner of the letter of transmittal accompanying the application papers, for example 'Proposed Class 2, subclass 129.'" M.P.E.P. § 601, 7th ed.

**TRANSMITTAL LETTER TO THE U.S. DESIGNATED OFFICE (DO/US)—  
ENTRY INTO THE U.S. NATIONAL STAGE UNDER CHAPTER I**

PCT/US01/03147

31 January 2001

04 February 2000

INTERNATIONAL APPLICATION NO.

INTERNATIONAL FILING DATE

PRIORITY DATE CLAIMED

Method For Producing Circular Or Multimeric Protein Species In Vivo or In Vitro

TITLE OF INVENTION And Related Methods

New England Biolabs, Inc., Evans, Thomas C., Xu, Ming-Qun

APPLICANT(S)

Box PCT

Assistant Commissioner for Patents

Washington D.C. 20231

ATTENTION: DO/US

**CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10\***

(When using Express Mail, the Express Mail label number is mandatory;  
Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

**MAILING**

☒ deposited with the United States Postal Service in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231

37 C.F.R. § 1.8(a)

37 C.F.R. § 1.10 \*

☐ with sufficient postage as first class mail.

☒ as "Express Mail Post Office to Addressee"

Mailing Label No. EL010481514US (mandatory)

**TRANSMISSION**

☐ facsimile transmitted to the Patent and Trademark Office, (703)

Signature

Melissa A. Jackson

(type or print name of person certifying)

Date: 9/20/01

\* Only the date of filing (§ 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under § 1.8 continues to be taken into account in determining timeliness. See § 1.703(f). Consider "Express Mail Post Office to Addressee" (§ 1.10) or facsimile transmission (§ 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

(Transmittal Letter to the United States Designated Office (DO/US)—Entry into National Stage under  
35 U.S.C. § 371 [13-6]—page 1 of 9)

09/937070, 012900

**NOTE:** The completion of those filing requirements that can be made at a time later than 20 months from the priority date results from the Commissioner exercising his judgment under the authority granted under 35 U.S.C. § 371(d). The filing receipt will show the actual date of receipt of the last item completing the entry into the national phase. See 37 C.F.R. § 1.491, which states: "An international application enters the national stage when the applicant has filed the documents and fees required by 35 USC 371(c) within the periods set forth in § 1.494 and § 1.495."

**WARNING:** Where the items are those that can be submitted to complete the entry of the international application into the national phase subsequent to 20 months from the priority date, the application is still considered to be in the international stage. And if mailing procedures are utilized to obtain a date the express mail procedure of 37 C.F.R. § 1.10 must be used (because international application papers are not covered by an ordinary certificate of mailing. 37 C.F.R. § 1.8(2)(xi)).

**WARNING:** Documents and fees must be clearly identified as a submission to enter the national stage under 35 U.S.C. § 371, otherwise the submission will be considered as being made under 35 U.S.C. § 111. 37 C.F.R. § 1.494(f).

**WARNING:** Failure to pay the national fee within 20 months from the priority date will result in the abandonment of the application. The time for payment of the basic fee is not extendable. M.P.E.P. § 1893.01(a)(1), 6th ed., rev. 3.

1. Applicant herewith submits to the United States Designated Office (DO/US) the following items under 35 U.S.C. § 371:

- a. ☒ This express request to immediately begin national examination procedures (35 U.S.C. § 371(f)).
- b. ☒ The U.S. National Fee (35 U.S.C. § 371(c)(1)) and
- ☒ other fees (37 C.F.R. § 1.492), as indicated below:

## 2. Fees

CLAIMS FEE	(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) CALCULATIONS
<input type="checkbox"/> *	TOTAL CLAIMS	21 —20=	1	×\$ 18.00=	\$ 18.00
	INDEPENDENT CLAIMS	3 —3=	0.00	×\$ 80.00=	0.00
	MULTIPLE DEPENDENT CLAIM(S) (if applicable) + \$270.00				270.00
BASIC FEE**	The international search fee, as set forth in § 1.445(a)(2) to be paid to the US PTO acting as an International Searching Authority:				
	<input checked="" type="checkbox"/> has been paid (37 CFR 1.492(a)(2)) ..... \$710.00				710.00
	<input type="checkbox"/> has not been paid (37 CFR 1.492(a)(3)) ..... \$1000.00				
	<input type="checkbox"/> where a search report on the international application has been prepared by the European Patent Office or the Japanese Patent Office (37 CFR 1.492(a)(5)) ..... \$860.00				
	Total of above Calculations				= 998.00
SMALL ENTITY	Reduction by ½ for filing by small entity, if applicable. Assertion must be made. (note 37 CFR 1.27)				- 499.00
	Subtotal				499.00
	Total National Fee				\$ 499.00
	Fee for recording the enclosed assignment document \$40.00 (37 CFR 1.21(h)). (See Item 10 below). See attached "ASSIGNMENT COVER SHEET (37 C.F.R. § 3.34)".				
TOTAL	Total Fees enclosed				\$ 499.00

\*See attached Preliminary Amendment Reducing the Number of Claims.

\*\*WARNING: "To avoid abandonment of the application, the applicant shall furnish to the United States Patent and Trademark Office not later than the expiration of 20 months from the priority date: \* \* \* (2) the basic national fee (see § 1.492(a)). The 20-month time limit may not be extended." 37 C.F.R. § 1.494(b).

(Transmittal Letter to the United States Designated Office (DO/US)—Entry into National Stage under 35 U.S.C. § 371 [13-6]—page 3 of 9)

0937070-1390

☒ **Assertion of Small Entity Status**

☒ **Applicant hereby asserts status as a small entity under 37 C.F.R. § 1.27.**

**NOTE:** 37 C.F.R. § 1.27(c) deals with the assertion of small entity status, whether by a written specific declaration thereof or by payment as a small entity of the basic filing fee or the fee for the entry into the national phase as states:

"(c) Assertion of small entity status. Any party (person, small business concern or nonprofit organization) should make a determination, pursuant to paragraph (f) of this section, of entitlement to be accorded small entity status based on the definitions set forth in paragraph (a) of this section, and must, in order to establish small entity status for the purpose of paying small entity fees, actually make an assertion of entitlement to small entity status, in the manner set forth in paragraphs (c)(1) or (c)(3) of this section, in the application or patent in which such small entity fees are to be paid.

(1) Assertion by writing. Small entity status may be established by a written assertion of entitlement to small entity status. A written assertion must:

(i) Be clearly identifiable;

(ii) Be signed (see paragraph (c)(2) of this section); and

(iii) Convey the concept of entitlement to small entity status, such as by stating that applicant is a small entity, or that small entity status is entitled to be asserted for the application or patent. While no specific words or wording are required to assert small entity status, the intent to assert small entity status must be clearly indicated in order to comply with the assertion requirement.

(2) Parties who can sign and file the written assertion. The written assertion can be signed by:

(i) One of the parties identified in §§ 1.33(b) (e.g., an attorney or agent registered with the Office), §§ 3.73(b) of this chapter notwithstanding, who can also file the written assertion;

(ii) At least one of the individuals identified as an inventor (even though a § 1.63 executed oath or declaration has not been submitted), notwithstanding §§ 1.33(b)(4), who can also file the written assertion pursuant to the exception under §§ 1.33(b) of this part; or

(iii) An assignee of an undivided part interest, notwithstanding §§ 1.33(b)(3) and 3.73(b) of this chapter, but the partial assignee cannot file the assertion without resort to a party identified under §§ 1.33(b) of this part.

(3) Assertion by payment of the small entity basic filing or basic national fee. The payment, by any party, of the exact amount of one of the small entity basic filing fees set forth in §§ 1.16(a), (f), (g), (h), or (k), or one of the small entity basic national fees set forth in §§ 1.492(a)(1), (a)(2), (a)(3), (a)(4), or (a)(5), will be treated as a written assertion of entitlement to small entity status even if the type of basic filing or basic national fee is inadvertently selected in error.

(i) If the Office accords small entity status based on payment of a small entity basic filing or basic national fee under paragraph (c)(3) of this section that is not applicable to that application, any balance of the small entity fee that is applicable to that application will be due along with the appropriate surcharge set forth in §§ 1.16(e), or §§ 1.16(f).

(ii) The payment of any small entity fee other than those set forth in paragraph (c)(3) of this section (whether in the exact fee amount or not) will not be treated as a written assertion of entitlement to small entity status and will not be sufficient to establish small entity status in an application or a patent."

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- ☒ Attached is a ☒ check ☐ money order in the amount of \$ 539.00
- ☐ Authorization is hereby made to charge the amount of \$ \_\_\_\_\_
- ☐ to Deposit Account No. \_\_\_\_\_
- ☐ to Credit card as shown on the attached credit card information authorization form PTO-2038.

**WARNING:** Credit card information should *not* be included on this form as it may become public.

- ☐ Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

A duplicate of this paper is attached.

**WARNING:** If the translations of the international application and/or the oath or declaration have not been submitted by the applicant within twenty (20) months from the priority date, the applicant will be so notified and given a period of time within which to file the translation and/or oath or declaration in order to prevent abandonment. The payment of the surcharge set forth in § 1.492(e) is required as a condition for accepting the oath or declaration later than twenty (20) months after the priority date. The payment of the processing fee set forth in § 1.492(f) is required for acceptance of an English translation later than twenty (20) months after the priority date. Failure to comply with these requirements will result in abandonment of the application. The provisions of § 1.136 will apply. 37 C.F.R. § 1.494(c).

3. A copy of the International application as filed (35 U.S.C. § 371(c)(2)):
- a. ☐ is transmitted herewith.
  - b. ☒ is not required, as the application was filed with the United States Receiving Office.
  - c. ☐ has been transmitted
    - i. ☐ by the International Bureau. Date of mailing of the application (from form PCT/IB/308): \_\_\_\_\_.
    - ii. ☐ by applicant on \_\_\_\_\_. (Date)

**NOTE:** Section 1.494(b) was amended to require that the basic national fee and a copy of the international application must be filed with the Office by 20 months from the priority date to avoid abandonment. "The International Bureau normally provides the copy of the international application to the Office in accordance with PCT Article 20. At the same time, the International Bureau notifies the applicant of the communication to the Office. In accordance with PCT Rule 47.1, that notice shall be accepted by all designated offices as conclusive evidence that the communication has duly taken place. Thus, if the applicant desires to enter the national stage and applicant has received notice from the International Bureau, applicant need only pay the basic national fee by 20 months from the priority date." [This can now be paid subsequently with a surcharge.] Notice of Jan. 7, 1993, 1147 O.G. 29 to 40, at 35.

4. ☐ A translation of the International application into the English language (35 U.S.C. § 371(c)(2)):
- a. ☐ is transmitted herewith.
  - b. ☒ is not required as the application was filed in English.
  - c. ☐ was previously transmitted by applicant on \_\_\_\_\_. (Date)

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5. ☐ Amendments to the claims of the International application under PCT Article 19 (35 U.S.C. § 371(c)(3)):

NOTE: The Notice of January 7, 1993 indicates that 37 C.F.R. § 1.494(d) was "amended to clarify the existing practice that PCT Article 19 Amendments must be submitted by 20 months from the priority date, which time may not be extended." This Notice further advises: "Of course, the failure to do so does not result in loss of the subject matter of PCT Article 19 amendments. The applicant may submit that subject matter in a preliminary amendment filed under Section 1.121. In many cases, filing an amendment under Section 1.121 is preferable since grammatical or idiomatic errors may be corrected." 1147 O.G. 29-40, at 35. See item 11(c) below. See also 37 C.F.R. § 1.494(d).

- a. ☐ are transmitted herewith.
- b. ☐ have been transmitted
  - i. ☐ by the International Bureau. Date of mailing of the amendment (from form PCT/IB/308): \_\_\_\_\_
  - ii. ☐ by applicant on \_\_\_\_\_ (Date)
- c. ☐ have not been transmitted, as
  - i. ☐ no notification has been received that the International Search Authority has received the Search Copy.
  - ii. ☐ the Search Copy was received by the International Searching Authority, but the Search Report has not yet been issued. Date of receipt of Search Copy (from form PCT/ISA/202): \_\_\_\_\_
  - iii. ☐ applicant chose not to make amendments under PCT Article 19. Date of mailing of Search Report (from form PCT/ISA/210): \_\_\_\_\_
  - iv. ☐ the time limit for the submission of amendments has not yet expired. The amendments, or a statement that amendments have not been made, will be transmitted before the expiration of the time limit under PCT Rule 46.1.

6. ☒ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. § 371(c)(3)):
- a. ☐ is transmitted herewith.
  - b. ☒ is not required as the amendments were made in the English language.
  - c. ☐ has not been transmitted for reasons indicated at point 5(c) above.
7. ☒ An oath or declaration of the inventor, including power of attorney, (35 U.S.C. § 371(c)(4)) complying with 35 U.S.C. § 115
- a. ☐ was previously submitted by applicant on \_\_\_\_\_ (Date)
  - b. ☐ is submitted herewith, and such oath or declaration
    - i. ☐ is attached to the application.
    - ii. ☐ identifies the application and any amendments under PCT Article 19 that were transmitted as stated in points 3(b) or (c) and 5(b); and states that they were reviewed by the inventor, as required by 37 C.F.R. § 1.70.
    - iii. ☒ will follow.

Other document(s) or information included:

8. ☒ An international Search Report or Declaration under PCT Article 17(2)(a):
- ☐ is transmitted herewith.
  - ☐ has been transmitted by the International Bureau. Date of mailing (from form PCT/IB/308): \_\_\_\_\_
  - ☒ is not required, as the application was searched by the United States International Searching Authority.
  - ☐ will be transmitted promptly upon request.
  - ☐ has been submitted by applicant on \_\_\_\_\_ (Date)
  - ☐ is not transmitted, as the international search has not yet issued.

9. ☒ An Information Disclosure Statement under 37 C.F.R. §§ 1.97 and 1.98:

- a. ☐ is transmitted herewith.

Also transmitted herewith is (are)

- ☐ Form PTO—1449 (PTO/SB/08A and 08B)  
☐ Copies of citations listed

- b. ☒ will be transmitted within THREE MONTHS of the date of submission of requirements under 35 U.S.C. § 371(c).

- c. ☐ was previously submitted by applicant on \_\_\_\_\_ (Date)

10. ☐ An assignment document is transmitted herewith for recording. A separate

- ☐ "COVER SHEET FOR ASSIGNMENT (DOCUMENT) ACCOMPANYING NEW PATENT APPLICATION" or

- ☐ FORM PTO—1595

is also attached.

- ☒ Please mail the recorded assignment document to:

- i. ☒ the person whose signature and address appears below.

- ii. ☐ the following:

Gregory D. Williams  
General Counsel  
New England Biolabs, Inc.  
32 Tozer Road  
Beverly, MA 01915

09/93/070-012200

11. ☐ Additional documents
- a. ☐ Copy of request (PCT/RO/101)
  - b. ☐ International Publication No. \_\_\_\_\_
    - i. ☐ Specification, claims and drawing
    - ii. ☐ Front page only
  - c. ☐ Preliminary amendment (37 C.F.R. § 1.121)
  - d. ☐ Other
12. ☐ The above checked items are being transmitted
- a. ☐ before the 18th month publication.
  - b. ☐ after publication and the article 20 communication, but before 20 months from the priority date.
  - c. ☐ after 20 months (revival).

NOTE: Petition to revive (37 C.F.R. § 1.137(a) or (b)) is necessary if 35 U.S.C. § 371 requirements are submitted after 20 months.

13. ☐ Certain requirements under 35 U.S.C. § 371 were previously submitted by the applicant on \_\_\_\_\_ (Date) namely:

### AUTHORIZATION TO CHARGE ADDITIONAL FEES

**WARNING:** Accurately count claims, especially multiple dependant claims, to avoid unexpected high charges if extra claims are authorized.

NOTE: "A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of time under this paragraph for its timely submission. Submission of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 C.F.R. § 1.136(a)(3).

NOTE: "Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 C.F.R. § 1.26(a).

- ☒ Please charge, in the manner authorized above, the following additional fees that may be required by this paper and during the entire pendency of this application:

☒ 37 C.F.R. § 1.492(a)(1), (2), (3), and (4) (filing fees)

**WARNING:** Because failure to pay the national fee within 20 months without extension (37 C.F.R. § 1.494(b)(2)), results in abandonment of the application, it would be best to always check the above box.

☒ 37 C.F.R. § 1.492(b), (c), and (d) (presentation of extra claims)

NOTE: Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims cancelled by amendment, prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 C.F.R. § 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.

☒ 37 C.F.R. § 1.17 (application processing fees)

☒ 37 C.F.R. § 1.17(a)(1)–(5) (extension fees pursuant to § 1.136(a)).

(Transmittal Letter to the United States Designated Office (DO/US)—Entry into National Stage under 35 U.S.C. § 371 [13-6]—page 8 of 9)

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- ☐ 37 C.F.R. § 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 C.F.R. § 1.311(b)).

NOTE: Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 C.F.R. § 1.311(b).

NOTE: 37 C.F.R. § 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application . . . prior to paying or at the time of paying . . . issue fee. . . ." From the wording of 37 C.F.R. § 1.28(b): (a) notification of change of status must be made even if the fee is paid as "other than a small entity" and (b) no notification is required if the change is to another small entity.


- ☐ 37 C.F.R. § 1.492(e) and (f) (surcharge fees for filing the declaration and/or filing an English translation of an International Application later than 20 months after the priority date.

097937070-012902

Reg. No. 30901

Tel. No.: ( 978 ) 927-5054 X:292

Customer No.: 28986

  
Signature of practitioner  
Gregory D. Williams  
General Counsel

(type or print name of practitioner)  
New England Biolabs, Inc.  
32 Tozer Road

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Beverly, MA 01915